



MODULE 5, LESSON 1

TECHNOLOGIES FOR PROSPECTION FOR MINERAL RESOURCES IN THE AREA.

READING LIST

REQUIRED READING

International Seabed Authority. "ISA TECHNICAL STUDY NO. 30. Marine mineral resources: scientific and technological Advances". Kingston: International Seabed Authority, 2021.

Sandwell, David T., Walter HF Smith, Sarah Gille, Steven Jayne, Khalid Soofi, and Bernard Coakley. "Bathymetry from space: White paper in support of a high-resolution, ocean altimeter mission." *Int. Geophys. Ser 69* (2001): 1049-1062.

Yoerger, Dana R., Albert M. Bradley, Michael Jakuba, Christopher R. German, Timothy Shank, and Maurice Tivey. "Autonomous and remotely operated vehicle technology for hydrothermal vent discovery, exploration, and sampling." *Oceanography 20*, no. 1 (2007): 152-161.

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Nakamura, K., S. Veirs, C. P. Sarason, R. E. McDuff, F. Stahr, D. R. Yoerger, and A. M. Bradley. "Electrochemical signals in rising buoyant plumes and tidally oscillating plumes at the main Endeavour vent field, Juan de Fuca Ridge." *EOS, Transactions of the American Geophysical Union 81*, no. 48 (2000).
Petersen, S., Krättschell, A., Augustin, N., Jamieson, J., Hein, J. R., & Hannington, M. D. (2016). News from the seabed – Geological characteristics and resource potential of deep-sea mineral resources. *Marine Policy*, 70, 175–187. <https://doi.org/10.1016/j.marpol.2016.03.012>

Jamieson, J. W., & Gartman, A. (2020). Defining active, inactive, and extinct seafloor massive sulfide deposits. *Marine Policy*, 117, 103926. <https://doi.org/10.1016/j.marpol.2020.103926>

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Murton, B. J., Lehrmann, B., Dutrieux, A. M., Martins, S., de la Iglesia, A. G., Stobbs, I. J., Barriga, F. J. A. S., Bialas, J., Dannowski, A., Vardy, M. E., North, L. J., Yeo, I. A. L. M., Lusty, P. A. J., & Petersen, S. (2019). Geological fate of seafloor massive sulphides at the TAG hydrothermal field (Mid-Atlantic Ridge). *Ore Geology Reviews*, 107, 903–925. <https://doi.org/10.1016/j.oregeorev.2019.03.005>

Petersen, Sven, Anna Krätschell, Nico Augustin, John Jamieson, James R. Hein, and Mark D. Hannington. "News from the seabed—Geological characteristics and resource potential of deep-sea mineral resources." *Marine Policy* 70 (2016): 175-187.

Hein, James R., and Andrea Koschinsky. "Deep-ocean ferromanganese crusts and nodules." (2014): 273-291.

German, Christopher R., Sven Petersen, and Mark D. Hannington. "Hydrothermal exploration of mid-ocean ridges: where might the largest sulfide deposits be forming?." *Chemical Geology* 420 (2016): 114-126.

Beaulieu, Stace E., Edward T. Baker, Christopher R. German, and Andrew Maffei. "An authoritative global database for active submarine hydrothermal vent fields." *Geochemistry, Geophysics, Geosystems* 14, no. 11 (2013): 4892-4905.

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